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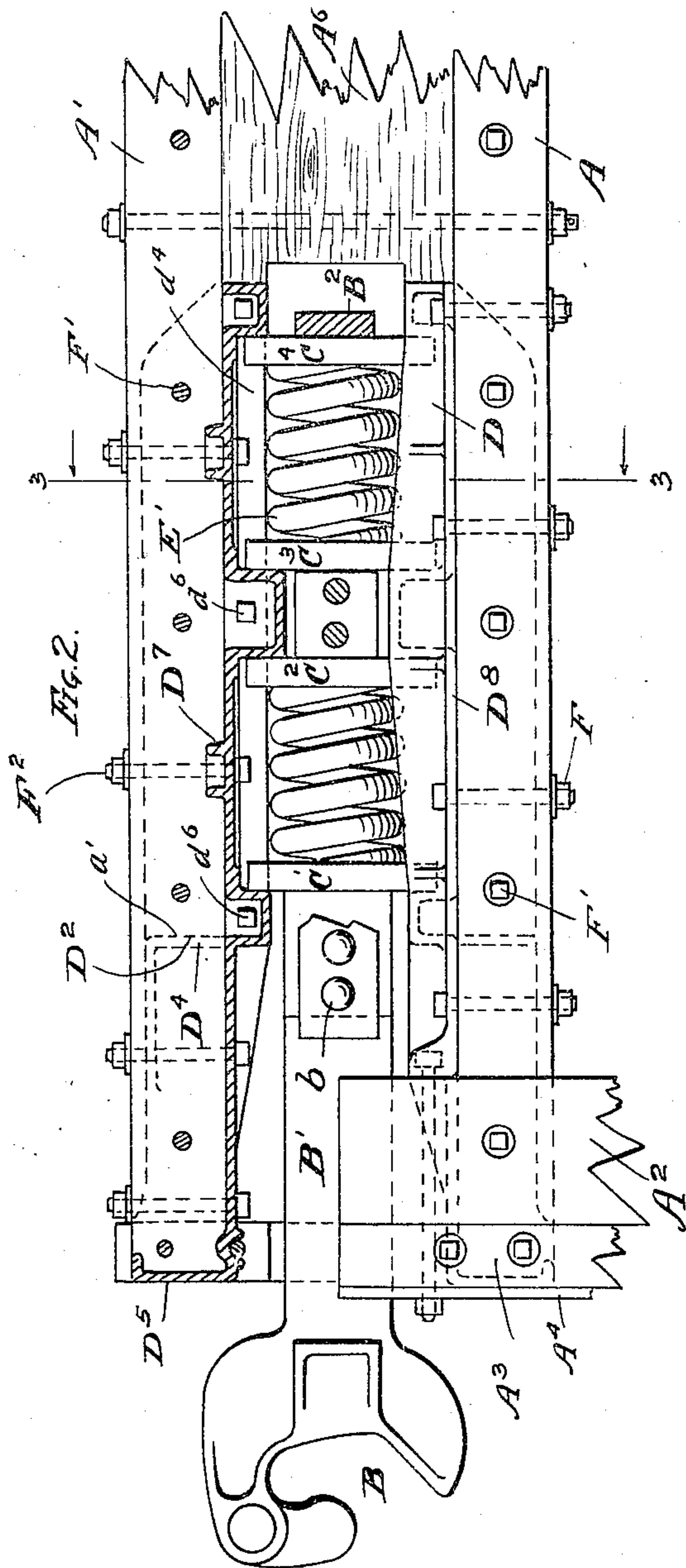
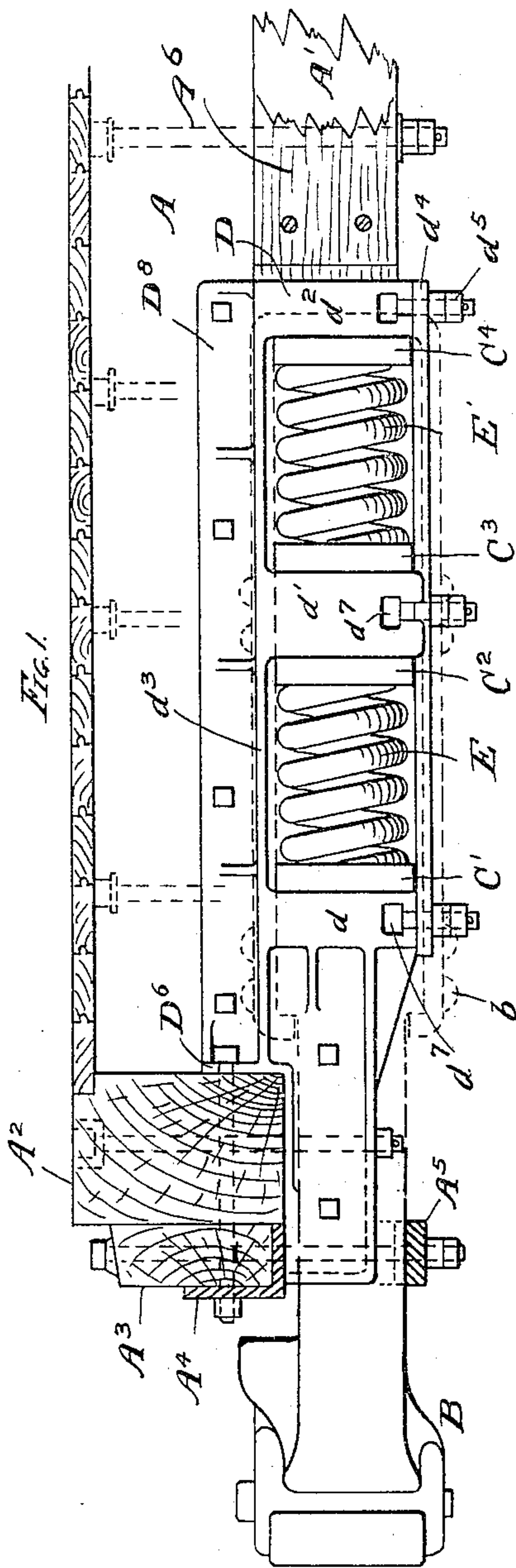
PATENTED JUNE 13, 1905.

W. H. MINER.

TANDEM SPRING DRAFT RIGGING FOR RAILWAY CARS.

APPLICATION FILED SEPT. 16, 1904.

2 SHEETS—SHEET 1.



WITNESSES:

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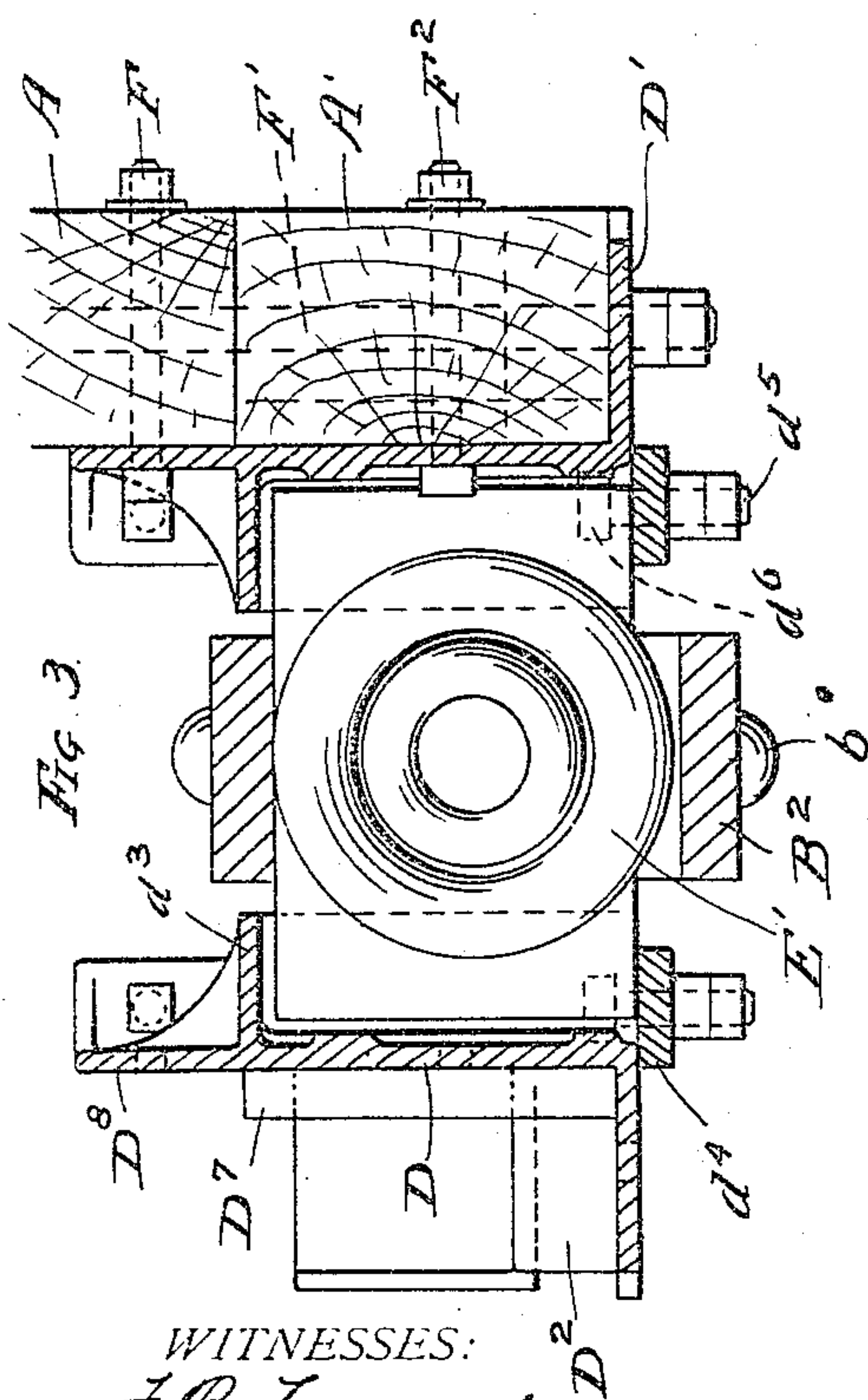
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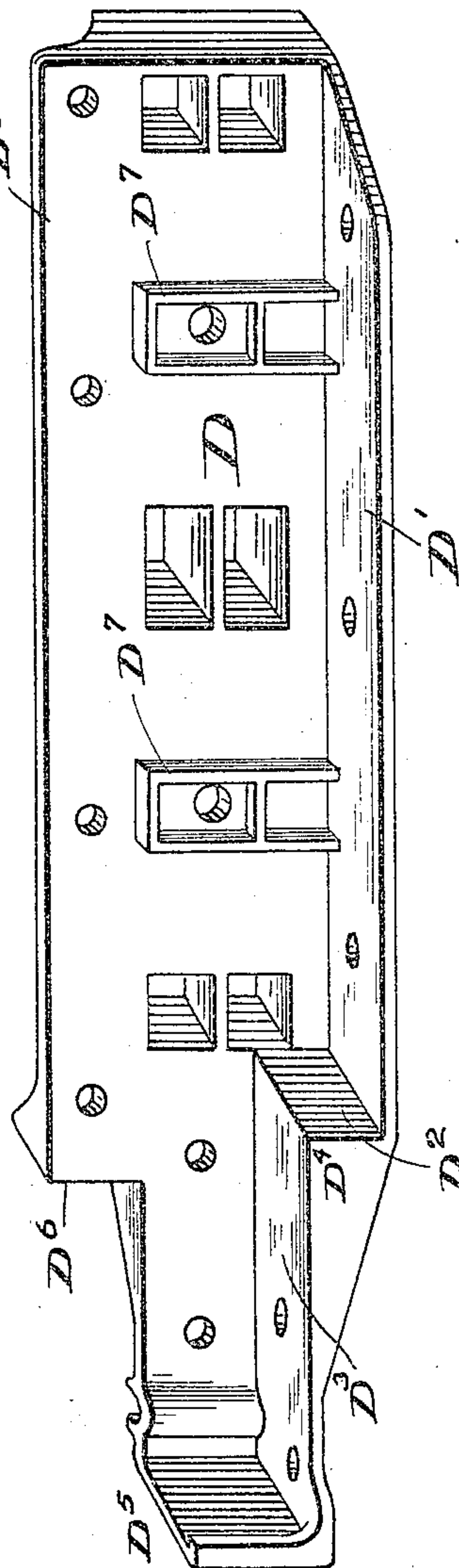
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2 SHEETS—SHEET 2.



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Fig. 4



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UNITED STATES PATENT OFFICE.

WILLIAM H. MINER, OF CHICAGO, ILLINOIS, ASSIGNOR TO W. H. MINER COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

TANDEM-SPRING DRAFT-RIGGING FOR RAILWAY-CARS.

SPECIFICATION forming part of Letters Patent No. 792,147, dated June 13, 1905.

Application filed September 16, 1904. Serial No. 224,666.

To all whom it may concern:

Be it known that I, WILLIAM H. MINER, a citizen of the United States, residing in Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Tandem-Spring Draft-Rigging for Railway-Cars, of which the following is a specification.

My invention relates to improvements in tandem-spring draft-rigging for railway-cars.

The object of my invention is to provide a tandem-spring draft-rigging of a simple, efficient, durable, and exceedingly-strong construction and in which the side plates or stop-castings may be very securely and firmly attached to the car-framework and the strains more completely and evenly distributed than heretofore, thus adapting the draft-rigging to successfully withstand without danger of giving way in any part the extremely-heavy blows or strains to which draft-rigging is subjected in practical use upon the large modern cars carrying heavy loads and coupled in long trains.

My invention consists in the means I employ to practically accomplish this object or result—that is to say, it consists, in connection with the customary draw-bar, tandem-springs, and followers, of side plates or stop-castings having the customary stops for the followers to abut against and provided each with a longitudinal flange at its lower edge fitting under the draft-timber or sill to which the stop-casting is secured and having a shoulder at its front end to abut in buffing against a corresponding shoulder on the draft-timber or car-sill and also furnished with a flange or shoulder to abut against the front end of the draft-timber or sill and a still further shoulder to abut in pulling against the cross-sill of the car-framework. The lateral longitudinal flange on the stop-casting and the shoulder near the front end thereof are below the line of draft, the horizontal plane extending centrally and longitudinally of the draw-bar and axially of the springs, while the flange or shoulder at the front end of the stop-casting is centrally thereof, so that the stop-cast-

ing has a direct abutment against the draft-timber or framework of the car both in the line of draft and also below the line of draft, and thus prevents any downward or wrenching strain being exerted upon the bolts by which the draft-rigging is secured to the car-frame. The side plates or stop-castings are thus in my invention furnished with shoulders or abutments that bear against the car-framework both in pulling and buffing and below the line of draft, as well as in the line of draft.

My invention also consists in the novel construction of parts and devices and in the novel combinations of parts and devices herein shown or described.

In the accompanying drawings, forming a part of the specification, Figure 1 is a side elevation, partly in longitudinal vertical section, of a draft-rigging embodying my invention. Fig. 2 is a plan view, partly in horizontal section. Fig. 3 is a cross-section on line 3 3 of Fig. 2, and Fig. 4 is a detail perspective view of one of the side plates or stop-castings.

In the drawings, A A represent the center sills; A' A', the draft-timbers or sills to which the side plates or stop-castings are directly secured; A², the front or cross sill; A³, the buffer-block; A⁴, the buffer-plate, and A⁵ the carry-iron.

B is the coupler; B', the draw-bar; B², the draw-bar extension, the same being preferably in the form of a yoke or strap secured to the draw-bar by bolts or rivets b.

C' C² C³ C⁴ are the followers, and E E' are tandem-arranged springs interposed between each pair of followers.

D D are the side plates or stop-castings, each of the same having shoulders or stops d' d² for the followers to abut against, an upper integral guide d³, and a lower removable guide d⁴, between which the followers reciprocate. The removable guide or plate d⁴ is secured in place by short bolts d⁵, the heads d⁶ of which fit in slots d⁷ in the stop-castings. Each of the side plates or stop-castings D is provided with a horizontal laterally-extend-

ing longitudinal flange D' at its lower edge, which fits under the draft-timber or sill A', and with a step or shoulder D², which is below the line of draft and which abuts against a corresponding shoulder or step a' on the draft-timber A'. By reason of this shoulder D² the front portion D³ of the lateral flange D' is above the main portion thereof, and a vertical strengthening-web D⁴ connects and strengthens the two portions D³ D' of this lateral flange. The stop-casting D is also provided with an end flange or shoulder D⁵, which abuts against the front end of the draft-timber or sill A', and thus forms an additional abutment of the side plate or stop-casting against the draft-timber. This abutting shoulder D⁵ is in the horizontal line of draft and extends above and below the same. The stop-casting D is also provided at its upper edge near its front end with a shoulder D⁶, which abuts against the front or cross sill A², and thus materially aids in resisting pulling strains, while the shoulders D³ and D⁵ effectually resist buffing strains. The side plate or stop-casting D is also preferably provided with abutment projections D⁷, which fit in corresponding gains or notches in the draft-timber. The rear end of the side plates or stop-castings D also abut against a filling-block A⁶, extending between the center sills. The side plates or stop-castings D are also provided with upright wings or extensions D⁸, which fit against the inner faces of the cross-sills A and to which the same are secured by bolts F. The side plates or stop-castings D are further secured to the center sills and draft-timbers by the upright bolts F' and the horizontal bolts F².

By my invention, as the side plate or stop-casting is provided with an abutting shoulder at its lower edge or below the line of draft and also with a lateral longitudinal flange, the side plate or stop-casting is thus not only itself very greatly strengthened, but it is also adapted to be secured to the car-frame in exceedingly strong manner and in a manner which relieves the bolts from wrenching strains.

I claim—

1. In a tandem-spring draft-rigging, the combination with a draw-bar, draw-bar extension, springs, followers and side plates or stop-castings, having stops for the followers to abut against, and provided each with a laterally-extending longitudinal flange fitting under the draft-timber or sill, and provided with an abutment or shoulder bearing against a shoulder on the under side of the draft-timber or sill, substantially as specified.

2. In a tandem-spring draft-rigging, the combination with a draw-bar, draw-bar extension, springs, followers and side plates or stop-castings having stops for the followers to abut against, and provided each with a laterally-

extending longitudinal flange fitting under the draft-timber or sill, and provided with an abutment or shoulder bearing against a shoulder on the under side of the draft-timber or sill, each side plate or stop-casting having also a flange at its shoulder or front end bearing against the front end of the draft-timber or sill, substantially as specified.

3. In a tandem-spring draft-rigging, the combination with a draw-bar, draw-bar extension, springs, followers and side plates or stop-castings having stops for the followers to abut against, and provided each with a laterally-extending longitudinal flange fitting under the draft-timber or sill, and provided with an abutment or shoulder bearing against a shoulder on the under side of the draft-timber or sill, each side plate or stop-casting having also a flange at its shoulder or front end bearing against the front end of the draft-timber or sill, each side plate or stop-casting being also furnished with a shoulder at its upper edge or side bearing against the front or cross sill of the car, substantially as specified.

4. In a tandem-spring draft-rigging, the combination with a draw-bar, draw-bar extension, springs, followers and side plates or stop-castings having stops for the followers to abut against, and provided each with a laterally-extending longitudinal flange fitting under the draft-timber or sill, and provided with an abutment or shoulder bearing against a shoulder on the under side of the draft-timber or sill, each side plate or stop-casting having also an abutment-shoulder at its upper edge bearing against the front or cross sill of the car, substantially as specified.

5. In a draft-rigging, the side plate or stop-casting having an abutment or shoulder at its lower side below the line of draft, and also an abutment-shoulder at its upper edge, and also a flange or shoulder adapted to bear against the front end of the draft-timber or sill, substantially as specified.

6. In a draft-rigging for railway-cars, a side plate or stop-casting having a laterally-extending longitudinal flange adapted to fit under a draft-timber or sill and provided with a shoulder at its lower edge or side to bear against the draft-timber or sill in resisting buffing strains, substantially as specified.

7. In a draft-rigging for railway-cars, a side plate or stop-casting, having a laterally-extending longitudinal flange adapted to fit under a draft-timber or sill, and provided with a shoulder at its lower edge or side to bear against the draft-timber or sill in resisting buffing strains, and a shoulder at its upper edge or side to bear against the front or cross sill in resisting pulling strains, substantially as specified.

8. In a draft-rigging for railway-cars, a side plate or stop-casting, having a laterally-extending longitudinal flange adapted to fit un-

der a draft-timber or sill, and provided with
a shoulder at its lower edge or side to bear
against the draft-timber or sill in resisting
buffing strains, and a shoulder at its upper
5 edge or side to bear against the front or cross
sill in resisting pulling strains, said side plate
or stop-casting having also a flange or shoul-

der adapted to bear against the front end of
the draft-timber or sill in resisting buffing
strains, substantially as specified.

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Witnesses:

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